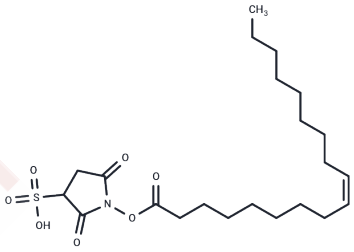
Data Sheet (Cat.No.T13036)

TargetMol

Sulfosuccinimidyl oleate

Chemical Properties



CAS No. : 135661-44-8

Formula: C22H37NO7S

Molecular Weight: 459.6

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sulfosuccinimidyl oleate (Sulfo-N-succinimidyl oleate) is a long-chain fatty acid that inhibits fatty acid transport into cells. It is a potent and irreversible inhibitor of the mitochondrial respiratory chain and binds the CD36 receptor on the surface of microglia. Sulfosuccinimidyl oleate is neuroprotective and alleviates stroke-induced neuroinflammation [1] [2].
Targets(IC50)	Mitophagy
In vitro	Treatment with sulfosuccinimidyl oleate (20 μM and 50 μM, 24 hours) does not affect cellular viability on its own. However, exposing BV2 cells to 100 ng/ml LPS and 5 ng/ml IFNγ slightly but significantly reduces their viability, a decrease that is prevented by co-treating with sulfosuccinimidyl oleate. Furthermore, co-treatment with sulfosuccinimidyl oleate (50 μM, 24 hours) notably reduces the LPS+IFNγ-induced expression of NOS2 and COX-2 in BV2 cells. Western blot analysis confirms a significant increase in phosphorylated p38 due to LPS/IFNγ, which is mitigated by co-treating with sulfosuccinimidyl oleate (50 μM, 24 hours) [1]. In summary, sulfosuccinimidyl oleate effectively counteracts the adverse effects on cell viability and inflammatory markers induced by LPS and IFNγ in BV2 cells.
In vivo	Sulfosuccinimidyl oleate (50 mg/kg; administered once via single oral gavage) significantly reduces cortical ischemic infarct size in male BALB/cABom mice subjected to the pMCAo model, showing a major reduction in brain damage compared to vehicle-treated controls, thus establishing its efficacy in this animal model [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1758 mL	10.879 mL	21.7581 mL
5 mM	0.4352 mL	2.1758 mL	4.3516 mL
10 mM	0.2176 mL	1.0879 mL	2.1758 mL
50 mM	0.0435 mL	0.2176 mL	0.4352 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Drahota Z, et al. Succinimidyl oleate, established inhibitor of CD36/FAT translocase inhibits complex III of mitochondrial respiratory chain. Biochem Biophys Res Commun. 2010 Jan 15;391(3):1348-51.
Dhungana H, et al. Sulfosuccinimidyl oleate sodium is neuroprotective and alleviates stroke-induced neuroinflammation. J Neuroinflammation. 2017 Dec 4;14(1):237.